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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/058,252	01/29/2002	Alistair Neil Coles	1509-270	3542

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EXAMINER

SELLERS, DANIEL R

ART UNIT

PAPER NUMBER

2644

DATE MAILED: 03/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/058,252

Applicant(s)

COLES ET AL.

Examiner

Daniel R. Sellers

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 December 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 and 30-36 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 8-22, 24-27 and 30-36 is/are rejected.
- 7) ☒ Claim(s) 7 and 23 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 December 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. Claims 1-6, 10-22, 26, 27, and 30-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Slezak and McPherson et al., U.S. Pat. Pub. 2001/0046199 (hereinafter McPherson).
2. Regarding claim 1, see Slezak column 7, line 62 – column 8, line 17, column 3, line 53 – column 4, line 15, and column 6, lines 33-40. Slezak teaches a playing terminal coupled to the audio source by a data link, wherein an audio transducer arrangement and a user control device is coupled to the terminal. Slezak also teaches that a plurality of audio components are transmitted via the data link, wherein the data link is a data bus between the audio data stored on a disk, or the like, and an audio transducer (Col. 9, lines 26-48). Slezak teaches that the terminal is adapted to output the audio components via the transducer arrangement (Fig. 3, units 55A-E). Slezak also teaches a focus component, wherein the focus component is the component to be moved in a three dimensional space, which is chosen by the user (Col. 10, lines 1-14). Slezak teaches a plurality of components arranged about the user, wherein one is taught to be the focus component (Fig. 10, unit 294 and the plural circles within the 3d space). However, Slezak does not teach that the focus track is transmitted at a different bit rate. McPherson teaches that unimportant audio, i.e. the non-focus component, can be transmitted using lower data resolutions and/or sampling rates (para. 0024, 0027, and 0028). It would have been obvious for one of ordinary skill in the art at the time of

the invention to combine the teachings of Slezak and McPherson for the purpose of saving bandwidth.

3. Regarding claim 2, the further limitation of claim 1, see the preceding argument with respect to claim 1. Slezak teaches a terminal for spatial processed audio.

4. Regarding claim 3, the further limitation of claim 2, see the preceding argument with respect to claim 1. Slezak teaches positional data relating to a three-dimensional space for spatial processing, and McPherson teaches that a focus component can be associated to an audio transducer, i.e. the front transducer(s) (para. 0019, 0021, and 0025).

5. Regarding claim 4, the further limitation of claim 1, see the preceding argument with respect to claim 1. The combination teaches that the tracks are transmitted to the terminal are sent at predetermined bit-rates, which are different for the focus and non-focus components.

6. Regarding claim 5, the further limitation of claim 4, see the preceding argument with respect to claim 4. The combination teaches that the focus component has a higher bit-rate.

7. Regarding claim 6, the further limitation of claim 1, see the preceding argument with respect to claim 1. The combination teaches the transmission of the non-focus elements can be transmitted using a lower bit-rate (McPherson, Para. 0010, 0020, 0021, and 0038).

8. Regarding claim 10, the further limitation of claim 1, see the preceding argument with respect to claim 1. Slezak teaches a user control device that uses a button.

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9. Regarding claim 11, the further limitation of claim 1, see the preceding argument with respect to claim 1. The combination teaches the features of claim 1, but they do not teach voice recognition. *Official Notice* is taken, for it is well known in that voice recognition is a useful in gathering user input. Voice dictation software has been on sale in the United States prior to filing.

10. Regarding claim 12, the further limitation of claim 1, see Slezak (Col. 3, lines 53-55). Slezak teaches a wireless data link.

11. Regarding claim 13, the further limitation of claim 12, see Slezak
... wherein the wireless data link is established over a mobile telephone connection. (Col. 4, lines 1-7). Slezak teaches the use of a wireless network and the use of modems to connect to a network, such as the Internet. It would have been obvious for one of ordinary skill in the art to combine these ideas and implement a wireless or cellular modem, which are well known devices in computer communications.

12. Regarding claim 14, the further limitation of claim 1, see the preceding argument with respect to claim 1. Slezak teaches that the user can browse sub-elements using the spatialized audio (Col. 7, line 62 – Col. 8, line 17).

13. Regarding claim 15, see the preceding argument with respect to claim 1. The combination teaches these features.

14. Regarding claim 16, see the preceding argument with respect to claim 1. The combination teaches these features.

15. Regarding claim 17, the further limitation of claim 16, see the preceding argument with respect to claim 2. The combination teaches spatialized audio.

16. Regarding claim 18, see the preceding argument with respect to claim 1. The combination teaches these features, wherein a control signal is sent to control the data rate of transmitted data (McPherson, para. 0038). The selection of a focus track, as taught by Slezak, column 10, lines 1-14, combined with the teaching of McPherson, para. 0038, teaches this feature.

17. Regarding claim 19, the further limitation of claim 18, see the preceding argument with respect to claim 2. The combination teaches spatialized audio.

18. Regarding claim 20, the further limitation of claim 19, see the preceding argument with respect to claim 3. The combination teaches positional data relating to a three dimensional space for spatial processing.

19. Regarding claim 21, the further limitation of claim 18, see the preceding argument with respect to claim 5. The combination teaches these features.

20. Regarding claim 22, the further limitation of claim 18, see the preceding argument with respect to claim 6. The combination teaches the transmission of the non-focus elements using a low bit-rate.

21. Regarding claim 26, the further limitation of claim 18, see the preceding argument with respect to claim 10. The combination teaches a user control device that uses a button.

22. Regarding claim 27, the further limitation of claim 18, see the preceding argument with respect to claim 11. The office takes *official notice* that voice recognition can be used as an input method.

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23. Regarding claim 30, the further limitation of claim 18, see the preceding argument with respect to claim 14. The combination teaches the browsing of sub-elements using the spatialized audio.

24. Regarding claim 31, the further limitation of claim 18, see the preceding argument with respect to claim 14. The combination teaches the use of hyperlinks.

25. Regarding claim 32, see the preceding argument with respect to claims 1 and 18. The combination teaches these features.

26. Regarding claim 33, see the preceding argument with respect to claims 1 and 18. The combination teaches these features.

27. Regarding new claim 34, the further limitation of claim 1, see the preceding argument with respect to claims 1 and 3. The combination teaches that plural sounds can be transmitted at higher bit-rates than the non-focus, or unimportant, audio components.

28. Regarding new claim 35, the further limitation of claim 15, see the preceding argument with respect to claims 15 and 34. The combination teaches these features.

29. Regarding new claim 36, the further limitation of claim 18, see the preceding argument with respect to claims 18 and 34. The combination teaches these features.

30. Claims 8, 9, 24, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Slezak and McPherson as applied to claim 1 above, and further in view of the paper authored by Kobayashi et al., "Dynamic Soundscape: mapping time to space for Audio Browsing" (hereinafter Kobayashi).

31. Regarding claim 8, the further limitation of claim 3, see the preceding argument with respect to claim 3. Kobayashi teaches a user interface that is mounted on the body (p.11, design of head interface paragraphs and p. 13, head interface paragraph). The combination of Slezak and McPherson teach the features of the parent claims, however they do not teach the use of head tracking or using a position sensor on a body part for user input. Kobayashi teaches an audio browser, and in one feature is the ability to track the users head movement for the purpose of bringing one of a plurality of sounds into focus within a three-dimensional soundscape. It would have been obvious for one of ordinary skill in the art to combine the teachings of Slezak, McPherson, and Kobayashi for the purpose of using a more natural user interface. Kobayashi teaches that it is more natural for a user to turn their head towards the sound, on which the user wishes to focus their attention.

32. Regarding claim 9, the further limitation of claim 8, see the preceding argument with respect to claim 8. In the combination, Kobayashi teaches the use of a head-mountable sensor.

33. Regarding claim 24, the further limitation of claim 18, see the preceding argument with respect to claim 8. The combination teaches these features.

34. Regarding claim 25, the further limitation of claim 24, see the preceding argument with respect to claim 9. The combination teaches these features.

Allowable Subject Matter

35. Claims 7 and 23 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

36. Regarding claim 7, the further limitation of claim 6,

... wherein the playing terminal is arranged to receive the burst of audio data, relating to each non-focus component, and to store the burst of data for subsequent replaying at the playing terminal.

The combination does not teach this feature. Slezak does teach burst data, or periodic audio, but Slezak does not teach that the burst data is the non-focus component.

Slezak teaches quite the opposite, wherein the burst data is the focused component (Col. 7, lines 37-54). Neither McPherson, nor the other prior art of record teaches this limitation.

37. Regarding claim 23, the further limitation of claim 22, see the preceding argument with respect to claim 7. The combination does not teach these features.

Response to Arguments

38. Applicant's arguments filed December 9, 2005 have been fully considered but they are not persuasive.

39. Regarding claims 1-6, 10-22, 26, 27, and 30-36, see the new rejections under 35 USC 103.

40. Regarding claims 8, 9, 24, and 25, see the new rejections of the independent claims from which they depend and the subsequent rejections under 35 USC 103.

Furthermore, Kobayashi teaches that the user has an inherent tendency to lean towards

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a sound of interest, or a sound on which the user wishes to focus their attention. The head tracking taught by Kobayashi teaches that the head movement, i.e. the angular distance between transducer and the direction of leaning, is tracked. This distance measure is a position sensor.

41. Regarding claims 11 and 27, the omission to traverse the official notice given in these claims is an assertion that the well-known feature of voice recognition for user input is admitted prior art (see MPEP 2144.03(c)).

42. Applicant's arguments, see page 22-23, filed December 9, 2005, with respect to claims 7 and 23 have been fully considered and are persuasive. The rejections of claims 7 and 23 have been withdrawn. The applicant is directed towards the preceding notice of allowability.

Conclusion

43. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Dutkovich, U.S. Pat. No. 4,176,252

44. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within

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TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel R. Sellers whose telephone number is 571-272-7528. The examiner can normally be reached on Monday to Friday, 9am to 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sinh Tran can be reached on (571)272-7564. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DRS


SINH TRAN
SUPERVISORY PATENT EXAMINER